

Application Serial No. 09/787,641
Amendment dated June 8, 2005
Reply to Office Action of March 8, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A synthetic middle distillate cut having less than 9 mass%, as determined according to IP 391 or ASTM D 5186 standards, aromatics content, between 0.44 mass% and 8.99 mass% monocyclic aromatics content, and less than 0.01 mass% polycyclic aromatics, wherein the synthetic distillate is derived from a FT primary product.

2-3 (Canceled)

4. (Previously Presented) A synthetic middle distillate cut as claimed in claim 1, having an isoparaffins to n-paraffins mass ratio of between about 1:1 to about 12:1.

5. (Original) A synthetic middle distillate cut as claimed in claim 4, wherein the isoparaffins to n-paraffins mass ratio is between about 2:1 to about 6:1.

6. (Original) A synthetic middle distillate cut as claimed in claim 5, wherein the isoparaffins to n-paraffins mass ratio is 4:1.

7. (Canceled)

8. (Previously Presented) A synthetic middle distillate cut as claimed in claim 4, wherein the synthetic distillate comprises more than 50% isoparaffins, the isoparaffins are predominantly methyl and/or ethyl and/or propyl branched.

9. (Original) A synthetic middle distillate cut as claimed in claim 8, wherein the gradient of an isoparaffins to n-paraffins mass ratio profile of the synthetic middle distillate cut increases from about 1:1 for C₈ to 8.54:1 for C₁₅ and decrease again to about 3:1 for C₁₈.

Application Serial No. 09/787,641
Amendment dated June 8, 2005
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10. (Original) A synthetic middle distillate cut as claimed in claim 9, wherein a fraction of the synthetic middle distillate cut in the C₁₀ to C₁₈ carbon number range has a higher ratio of isoparaffins to n-paraffins than a C₈ to C₉ fraction of the synthetic middle distillate cut.

11. (Previously Presented) A synthetic middle distillate cut as claimed in claim 9, wherein the isoparaffins to n-paraffins mass ratio of the C₁₀ to C₁₈ fraction is between 1:1 and 9:1.

12. (Currently Amended) A synthetic middle distillate cut as claimed in claim 9₈, wherein the isoparaffins to n-paraffins mass ratio is about 8.54:1 for a C₁₅ fraction of the synthetic middle distillate cut.

13. (Previously Presented) A synthetic middle distillate cut as claimed in claim 8, wherein a C₁₉ to C₂₄ fraction of the middle distillate cut has a mass ratio range of isoparaffins to n-paraffins of between 3.3:1 and 5:1.

14. (Previously Presented) A synthetic middle distillate cut as claimed in claim 8, wherein the mass ratio of isoparaffins to n-paraffins is adjusted by controlling the blend ratio of hydrocracked to straight run components of the synthetic middle distillate cut.

15. (Original) A synthetic middle distillate cut as claimed in claim 14, wherein the isoparaffins to n-paraffins mass ratio of the C₁₀ to C₁₈ fraction having 30% straight run component is between 1:1 and 2:5:1.

16. (Original) A synthetic middle distillate cut as claimed in claim 14, wherein the isoparaffins to n-paraffins mass ratio of the C₁₀ to C₁₈ fraction having 20% straight run component is between 1.5:1 and 3:5:1.

17. (Original) A synthetic middle distillate cut as claimed in claim 14, wherein the isoparaffins to n-paraffins mass ratio of the C₁₀ to C₁₈ fraction having 10% straight run component is between 2.3:1 and 4.3:1.

Application Serial No. 09/787,641
Amendment dated June 8, 2005
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18. (Original) A synthetic middle distillate cut as claimed in claim 14, wherein the isoparaffins to n-paraffins mass ratio of the C₁₀ to C₁₈ fraction having substantially only a hydrocracked component is between 4:1 and 9:1.
19. (Previously Presented) A middle distillate cut as claimed in claim 8, wherein at least some of the isoparaffins are methyl branched.
20. (Previously Presented) A middle distillate cut as claimed claim 8, wherein at least some of the isoparaffins are di-methyl branched.
21. (Previously Presented) A middle distillate cut as claimed claim 8, wherein at least 30% (mass) of the isoparaffins are mono-methyl branched.
22. (Previously Presented) A middle distillate cut as claimed claim 8, wherein at least some of the isoparaffins are ethyl branched.
- 23-25 (Canceled)
26. (Previously Presented) A middle distillate cut as claimed in claim 8, wherein the synthetic distillate is a FT product.
- 27-56 (Canceled)
57. (Currently Amended) A synthetic middle distillate cut as claimed in claim 11, wherein the a C₁₉ to C₂₄ fraction of the middle distillate cut has a mass ratio range of isoparaffins to n-paraffins of between 4:1 and 4.9:1.